

CLAIMS

What is claimed is:

1. A belt coil as a transmitter/receiver antenna in a transponder apparatus for medical and veterinary applications, comprising: a belt coil having at least one electrically insulated conductor tape of a length such that it can be placed tightly around a human or animal body part, said conductor tape including at least one electrically insulated flexible conductor extending on said tape in parallel arrangement with any additional conductor, said conductor tape including a resilient section and each conductor being longitudinally expandable along the resilient section of said conductor tape, a connector member provided at each of the opposite ends of said conductor tape, said connector members being insertable into, and lockable in engagement with, each other, said connector members including contact structures which are joined when the connector members are interconnected, and said conductors being connected to said contact structures in a displaced fashion such that the end of one conductor is transposed to join the beginning of the next transversely adjacent conductor, and the beginning of the first conductor as well as the end of the last conductor are accessible.

2. A belt coil according to claim 1, wherein said belt coil includes at least first and second layers of conductors and the beginning of the second layer of conductors is connected to the end of the last conductor of first layer of conductors, the end of the last conductor of the second layer of conductors being accessible.

3. A belt coil according to claim 1, wherein said connector members include locking means for interlocking said connector members in a connected state.

4. A belt coil according to claim 3, wherein said locking means is a releasable engagement lock.

5. A belt coil according to claim 3, wherein said locking means is a VELCRO® lock.

6. A belt coil according to claim 3, wherein said locking means includes a locking arm pivotally supported on one of said connector member and engageable with said other connector member for preventing unintended disconnection of said connector member.

7. A belt coil according to claim 1, wherein said conductors are connected to the elastic tape section by one of sewing cementing or clamping.

8. A belt coil according to claim 7, wherein each of said connector members includes a single-pole connector with a contact wire to the respective free conductor end of the connector member providing electrical access to the beginning and the end of the coil formed with the connector members closed.

9. A belt coil according to claim 7, wherein one of said connector members includes a double pole connector with contacts to the free conductor ends of the connector members so as to provide for electrical access to the beginning and the end of the coil formed with the connector members closed.